

Amendments to the Drawings:

Please replace FIG. 4 with the replacement drawing included in the Appendix.

Applicants submit that the amended FIG. 4 is fully supported by in the original disclosure at least by original claim 28, and that no new matter has been added. As amended, FIG. 4 has been corrected to more accurately reflect the process described in original claim 28. More particularly, FIG. 4 has been amended to show a memory controller 495 coupled to the host monitor 420.

REMARKS

Applicants respectfully requests reconsideration of the above referenced patent application in view of the amendments and remarks set forth herein, and respectfully request that the Examiner withdraw all rejections. Claims 1, 11, 21, 28 have been amended. No claims have been canceled. No claims have been added. Thus, claims 1-35 are pending.

Objections

Objection to the Specification

The Office Action objects to the specification as failing to provide proper antecedent basis either for “an article comprising a computer-accessible medium,” as recited in claims 11-20 and claims 28-35, or for a “memory controller,” as recited in claim 28. Regarding the objection, paragraph [0016] has been amended herein to further provide specific antecedent basis for both a “memory controller” and “an article comprising a set of instructions on a computer-accessible storage medium.” Applicants respectfully submit that no new matter has been added by the amendment to the specification, which is supported in the original disclosure at least by original claim 28. Applicants further submit that the specification in its current amended form provides proper antecedent basis for the claimed subject matter, as required by 37 C.F.R. §1.75(d)(1) and M.P.E.P. §608.01(o), and request that this objection be withdrawn.

Objection to the Drawings

The Office Action objects to the drawings under 37 C.F.R. §1.83(a) for failing to show every feature of the invention specified in the claim. Specifically, the “memory controller” of

claim 28 is alleged to be missing from the drawings. In compliance with 37 C.F.R. §1.121(d), Applicants submit herein an amended replacement drawing sheet for FIG. 4 showing a memory controller 495. Applicants submit that no new matter has been added by the amendment to the specification, which is supported in the original disclosure at least by original claim 28. Accordingly, Applicants request that the objection to the drawings under 37 C.F.R. §1.83(a) be withdrawn.

35 U.S.C. §101 Rejections

The Office Action rejects claims 11-20 and 28-35 under 35 U.S.C. §101 for allegedly being directed to non-statutory matter. More particularly, the Office Action contends that references to “computer-accessible medium” in the claims may include a non-statutory transmission medium, and further suggests that the claims instead specify a “computer-accessible storage medium.” Applicants amend the claims herein to specify a “computer-accessible storage medium” in claims 11-20 and 28-35, as suggested in the Office Action. Accordingly, Applicants respectfully request that this rejection be withdrawn.

35 U.S.C. §102 Rejections

35 U.S.C. §102(e) Rejection over *Madukkarumukumana*

The Office Action rejects claims 1-3, 7, 8 and 10 under 35 U.S.C. §102(e) as being anticipated by *Madukkarumukumana et al.*, U.S. Patent Publication No. 2005/0125580 (*Madukkarumukumana*). The Office Action alleges that *Madukkarumukumana* anticipates a method of selectively transmitting to virtual machines an indication of an interrupt by disclosing,

inter alia, checking one or more status registers associated with a shared interrupt interface to identify a device. To overcome a 35 U.S.C. §102(e) rejection, Applicants may either demonstrate that the cited document fails to teach one limitation in the rejected claim, or add such a limitation to the claim by appropriate amendment. See M.P.E.P. §2131. For at least the following reasons Applicants traverse the above rejection.

Currently amended independent claim 1 recites in a salient portion (emphasis added):

“...checking one or more **status registers** associated with the shared interrupt interface **to identify an interrupt status** of a device; and

transmitting an indication of the interrupt message...the transmitting **based at least in part on the identified interrupt status.**”

The current claim amendments are supported in the original disclosure at least by paragraph [0016] of the specification. Applicants respectfully submit that the rejected claims are patentable over the reference based at least on independent claims 1, as amended. Specifically, *Madukkarumukumana* does not disclose **checking** one or more status registers associated with a shared interrupt interface **to identify an interrupt status** of a device. In alleging that *Madukkarumukumana* discloses checking one or more status registers associated with a shared interrupt interface to identify a device, the Office Action asserts:

“since the I/O hub (e.g. shared interrupt interface) 210 in *Madukkarumukumana* can associate interrupts generated by a particular device with a virtual machine ID (using a participant table 212 [which is in fact associated with the shared interrupt interface 210

since it is located within shared interrupt interface 210]), it is understood that this would allow the system of *Madukkarumukumana* to identify the interrupt generating device (see *Madukkarumukumana* page 3, paragraphs 0024, and paragraph 0031)."

Applicants note that paragraph [0020] of *Madukkarumukumana* describes "a participant table or equivalent structure in the IO hub may be used to associate the processors with the processor's currently executing VMs." The Office Action seems to infer from *Madukkarumukumana* a disclosure of an extended version of participant table 212 which further associates identifiers of currently executing VMs with identifiers of interrupt generating devices.

M.P.E.P. §2131 states in a salient portion (emphasis added):

"A claim is anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)..."The **identical** invention must be shown **in as complete detail** as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

First, Applicants note that any inferred extension of participant table 212 would be **superfluous** to the subject matter of *Madukkarumukumana*, which handles interrupts without ever needing to identify the interrupt generating device. More particularly, *Madukkarumukumana* routes interrupts using a VM identifier included with the interrupt message itself, **regardless** of its association to an interrupt generating device. Consequently, *Madukkarumukumana* does not

disclose a **checking** of any extended participant table, assuming such an extended participant table anticipates the one or more status registers **checked** in current claim 1.

Second, independent claim 1 is further amended herein to further distinguish *Madukkarumukumana*. Assuming *arguendo* that, in associating interrupts generated by a particular device with a virtual machine ID, *Madukkarumukumana* discloses a system checking one or more status registers to identify the interrupt generating **device**, a review of *Madukkarumukumana* shows that the reference is **silent** as to identifying the interrupt status of a device. The Office Action does **not** offer the *Madukkarumukumana* as disclosing checking one or more status registers associated with a shared interrupt interface **to identify an interrupt status** of a device, and Applicants respectfully submit that the reference does not expressly or inherently provide such a disclosure in as complete detail as set forth in amended claim 1.

Accordingly, amended independent claims 1 contains at least one limitation not found in *Madukkarumukumana*, and is patentable over the reference. Furthermore, in depending directly or indirectly from independent claim 1, each of dependent claims 2, 3, 7, 8 and 10 incorporate at least one limitation not found in *Madukkarumukumana*. Therefore, Applicants request that the rejection of claims 1-3, 7, 8 and 10 under 35 U.S.C. §102(e) based on *Madukkarumukumana* be withdrawn.

35 U.S.C. §103(a) Rejections

35 U.S.C. §103(a) Rejection over *Madukkarumukumana* and *Le*

The Office Action rejects claims 4-6, 9 and 11-35 under §103(a) as being unpatentable over *Madukkarumukumana* in view of *Le*, USPN 6,908,038 (*Le*). Specifically, the Office Action relies on *Madukkarumukumana* as disclosing the elements discussed with regard to the above 35 U.S.C. §102(e) rejection, while further alleging that *Le* discloses use of a Peripheral Component Interconnect (PCI). To overcome a rejection under 35 U.S.C. §103(a), Applicants may show that there is at least one limitation of the claim which is not taught or suggested by any combination of the cited references, or alternatively add such a limitation by appropriate amendment. See M.P.E.P. §2143. For at least the following reasons, Applicants traverse these rejections.

Applicants respectfully submit that the rejected claims are patentable over *Madukkarumukumana* at least based on independent claims 1, 11, 21, and 28 as amended. As discussed above, claim 1 has at least one limitation- i.e. **checking** one or more status registers associated with a shared interrupt interface **to identify an interrupt status** of a device- which is neither expressly nor inherently disclosed by *Madukkarumukumana*. Like claim 1, each of currently amended independent claims 11, 21 and 28 also include limitations describing a similar checking of one or more status registers associated with a shared interrupt interface to identify an interrupt status of a device. The Office Action does not offer *Le* as further teaching or suggesting this at least one limitation, nor is this at least one limitation taught or suggested by any combination of the two references.

For at least the foregoing reasons, each of currently amended independent claims 1, 11, 21 and 28 includes at least one limitation which is not taught or suggested by any combination of *Madukkarumukumana* and *Le*, as required under 35 U.S.C. §103(a). In depending directly or indirectly from one of independent claims 1, 11, 21 and 28, each of dependent claims 4-6, 9 and

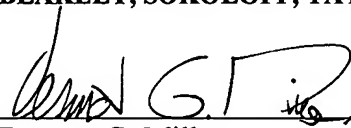
12-20, 22-27 and 29-35 incorporate at least one limitation not taught or suggested by *Madukkarumukumana* and *Le*. Accordingly, the claims are patentable and Applicants request that the rejection of claims 4-6, 9 and 11-35 under §103(a) based on *Madukkarumukumana* and *Le* be withdrawn.

CONCLUSION

For at least the foregoing reasons, Applicants submit that the objections and rejections have been overcome. Therefore, claims 1-35 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account No. 02-2666.

Respectfully submitted,
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Appendix: